



IFFTI 2017 AMSTERDAM

BREAKING THE FASHION RULES

CONFERENCE PROCEEDINGS

IFFTI Conference 2017: Breaking The Fashion Rules

Copyright © 2017 by International Foundation of Fashion Technology Institutes, Inc. All rights reserved.

COPYRIGHT AND REPRINT PERMISSION

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law, for private use of patrons.

University of Applied Sciences Amsterdam

AMFI - Amsterdam Fashion Institute

Mauritskade 11

1091 GC, Amsterdam

The Netherlands

Tel: +31(0)20-595 45 55

Email: amfi.mail@hva.nl

Additional copies of this publication are digitally available from:

<http://iffti.amfi.nl/conference-proceedings>

P R E F A C E

IFFTI was founded in 1999 with a mission to develop a global network of institutions to advance education in Design, Technology and Business for fashion and its related industries through international collaboration. The purpose of IFFTIs Annual Conferences is to promote debate, interaction, and professional development for students, educators and researchers (www.iffti.com).

AMFI – IFFTIs - Breaking the Fashion Rules was a three-day event (*March 28th, 29th & 30th 2017*) where interaction took place between keynote speakers – education – research and the fashion industry.

‘Old’ paradigms and strategies within the fashion industry are still dominant; more, cheaper, bigger, faster and a constant focus on growth and return on investment.

Education can provide a catalyst for change, by interrogating the status quo. We can design the change, create the opportunities, and build a generation of fashion professionals who know how to break the rules and to develop new perspectives.

My sincere thanks to the sponsors for providing us support and funds for holding this conference.

My special thanks to Souraya Bouwmans-Sarraf Chair of 2017 IFFTIs conference, for her sincere efforts, hard work and commitment for this conference. After six years as the Director of AMFI she was able to complete her tenure with this testament of her drive and passion for IFFTIs.

With warm regards,

Irene Sparreboom

DIRECTOR OF AMSTERDAM FASHION INSTITUTE

INTRODUCTION

It is an honour and privilege to present to you the proceedings of the 19th edition of the International Foundation of Fashion Technology Institutes (IFFTI) conference, held in Amsterdam, the Netherlands on the 28th, 29th and 30th of March 2017.

It was a great pleasure to meet so many of our international colleagues, researchers, students and fashion industry professionals and welcome them to our capital to discuss the theme 'Breaking the Rules'

AMFI is currently the largest fashion institute in the Netherlands. However, what makes AMFI truly unique is that it is also the only fashion institute in the Netherlands that covers the entire fashion chain. This not only ensures our students have a broad perspective of the fashion industry, but also allows us to both detect and address the ever changing spirit of fashion from a holistic perspective.

In recent years the need for a paradigm shift clearly came to the fore. In a rapidly changing global economy and with accelerated advances in technology there are tensions and dichotomies at the heart of the fashion industry. The development of mobile commerce has created a shifting dynamic which has altered the ways in which people consume and engage with fashion. This all enables lower costs and greater flexibility in design, quality, production and speed to the consumer. However, the traditional strategies within the fashion industry are still dominant; more, cheaper, bigger, faster with a constant focus on growth and return on investment.

Today, the fashion industry is faced with many challenges. Our aim, with the IFFTI conference was to interrogate some vital but basic questions; What does fashion signify and contribute to a healthier, better and a prosperous world for everyone? What are the big challenges the fashion industry is facing? Which rules do we have to break to find new answers for these challenges? And in what ways can fashion education initiate and lead this process?

We at AMFI believe that education can provide a catalyst for change, by questioning the status quo. We can create new opportunities by designing the change, creating the opportunities, and building a generation of fashion professionals who know how to break the rules and how to develop new perspectives.

During keynote lectures at the Rijksmuseum and the Hermitage we hope we inspired you with a combination of innovative contemporary fashion initiatives as well as our rich heritage. I would like to take this opportunity to especially thank our sponsor Heineken, who made it possible for us to enjoy these great locations.

During the conference, over 25 academic papers were presented. These papers initiated discussions between the delegates on why and how the fashion rules should and could be broken.

I would like to thank each of the contributors for sharing your papers so that those who were not able to attend the conference or the presentations can still benefit from your knowledge.

Organising this conference was an incredibly rewarding journey and I wish to thank the IFFTI Executive Board for their support and trust in our abilities as hosts and editors of the Conference Proceedings. I would also like to give special thanks to Souraya Bouwmans-Sarraf Chair of 2017 IFFTI conference, for her sincere efforts, hard work and commitment for this conference. After six years as the Director of AMFI she was able to complete her tenure with this testament of her drive and passion for IFFTI.

I hope you will enjoy reading each of these papers and that they will inspire a dialogue with colleagues, student, and fashion practitioners to break the fashion rules.

Irene Sparreboom

DIRECTOR OF **AMSTERDAM FASHION INSTITUTE**

CONFERENCE THEME

IFFTI Conference 2017: Breaking The Fashion Rules

In today's rapidly changing global economy, and with accelerating advances in technology, there are tensions and dichotomies at the heart of the fashion industry. The development of mobile commerce has created a shifting dynamic which has altered the ways in which people consume and engage with fashion. This has enabled lower costs and greater flexibility in design, quality, production and speed to consumer. But the 'old' paradigms and strategies within the fashion industry still dominate; more, cheaper, bigger, faster – and a constant focus on growth and return on investment. Large-scale incidents and controversies are presenting the fashion industry with all kind of issues.

Increasingly, these boil down to the basic questions:

- What does fashion signify?
- And how does fashion contribute to a healthier, better, and more prosperous world for everyone?

At the same time, these changes are creating new opportunities for a young generation to question the status quo and to challenge the fashion industry to find new solutions that are special, exclusive, and innovative.

In conversations and countless articles we hear how the fashion industry needs to adapt to this state of constant flux, and that not everyone wants to embrace this call for change, being unable or unwilling to abandon the old rules.

Education can provide a catalyst for change by interrogating the status quo. We can design the change, create the opportunities, and build a gen-

eration of fashion professionals who know how to break the rules and to develop new perspectives on challenging issues.

- What are the serious challenges the fashion industry is facing today?
- Which fashion rules will we have to break in order to find new answers for these challenges?
- And how can fashion education initiate and lead this process?

The 2017 IFTTI Annual Conference in Amsterdam has therefore adopted 'Breaking the rules' as its central theme.

1. FASHION ACTIVISM

(Different perspectives and paradigms on fashion)

- Historical
- Cultural
- Aesthetic
- Consumer

2. FASHION BUSINESS MODELS

(Corruptive systems of fashion)

- Business models
- Production models
- Fashion systems

3. FASHION DISRUPTIVE TECHNOLOGY

(Different approaches to the fashion product)

- Digital and online technology
- Biotechnology
- Textile technology



AMSTERDAM FASHION INSTITUTE

UNIVERSITY OF APPLIED SCIENCES AMSTERDAM

AMFI-AMSTERDAM FASHION INSTITUTE

Mauritskade 11

1091 GC, Amsterdam, The Netherlands

Tel: +31(0)20-595 45 55

amfi.mail@hva.nl

WWW.AMFI.NL



INTERNATIONAL FOUNDATION OF FASHION
TECHNOLOGY INSTITUTES

C/o Pearl Academy of Fashion, A-4, Naraina
Industrial Area,

Phase II, New Delhi – 110 028, India

Tel: 00-91-11- 41418789/ 90

iffjisec@yahoo.com

WWW.IFFT.I.COM

AMFI's education covers all facets of fashion from developing a raw idea to a product and an image. Students are taught to understand the entire fashion chain and their specific discipline in a wider perspective. With a reality school concept we are combining creativity, research, craftsmanship and technology to prepare our students for the future.

AMFI is the largest fashion institute in the Netherlands. More than 100 lecturers teach more than 1100 students about all aspects of the fashion world. AMFI is also the only fashion institute in the Netherlands that covers the entire fashion chain. This ensures our students to have a broad perspective of the fashion industry.

They choose to specialise in either FASHION & DESIGN, FASHION & MANAGEMENT OR FASHION & BRANDING. AMFI offers all its programmes in Dutch as well as in English. Students graduate with a Bachelor's Degree in Fashion & Textile Technologies.

The International Foundation of Fashion Technology Institutes (IFFTI) is an international association of leading higher education institutions dedicated to promoting excellence in teaching and learning in fashion and fashion related programs.

IFFTI is the most comprehensive and prestigious international organisation representing leading fashion higher education institutions in areas of design, technology and business. The foundation comprises of members from over 19 countries world-wide.

IFFTI Member Institutions participate in International annual conferences and collaborate with each other in bilateral agreements and many professional development activities. IFFT has set the standard for fashion education throughout the world and IFFT Members foster close relationships with fashion related industries.

IFFTI 2017
AMSTERDAM

Fashion Activism



Photo: Amy Kleingeld

CONFERENCE PROCEEDINGS

SUBTOPIC

FASHION ACTIVISM

Different perspectives and paradigms on fashion

Papers & Abstracts

The rule that needs to be broken: smart fashion is for gadget junks or special needs Natalia Berger.....	3
Abstract: Design practice and craftsmanship: reimagining the craft sector in India Vandana Bhandari, Professor, Jaspal Kalra, PhD.....	12
Rewriting History: Contemporary Reworking of Historical 1970's Fashion Colours Dr Julie King.....	13
Exploring Chinese fashion identity: a new perspective Dr Lily Ye	19
Fashion rule defied: Colourful, contextualized, and visually compelling: Challenging the mundane notion of uniforms. Ambika Magotra	30
Changing mindset in the handloom weaving cluster in Varanasi: from child labour to child centric Prof. Kripal Mathur, Savita Sheoran Rana	43
The Delights of Difference Fiona Minors	52
Abstract: Hack the black box: Consumer agency in the sharing economy Daphne Mohajer va Pesaran.....	62

The Rule That Needs To Be Broken: Smart Fashion Is for Gadget Junks or Special Needs

A U T H O R

Natalia Berger

natalia.berger@inholland.nl

INHOLLAND UNIVERSITY OF APPLIED SCIENCE, THE NETHERLANDS

K E Y W O R D S

Smart fashion, framing, mass media, consumer, fashion discourse

A B S T R A C T

Numerous market studies predict each year significant growth of the wearable technology market and a massive increase of global spending on wearable devices. Simultaneously, market analytics are talking about “the uncertainty of consumer receptivity”. Till now the popularity of wearables is limited to a number of gadgets as smart watches and fitness bands, health and self-care wearable devices. Mass production of smart fashion items is still out of question. Whether this “rule” will be broken any soon, depends on a lot of technological and social factors. One of these is mass media. Researchers emphasise the crucial role of the mass media in the fashion discourse, where the media has been seen as *“an important basis of the ideology of consumption”*.

The objective of the presented research is to show how smart fashion has been presented in the modern journalists texts published in English. The principles of the critical discourse analysis and framing theory were applied to the coding system of our content analysis of 448 relevant texts retrieved from LexisNexis database. The biggest amount of the analysed journalistic texts are reporting about the relies of the new smart product; the articles about the future potentials of the wearables and the reviews of the latest e-textiles market research are also among the most popular subjects of the media. A consumer self attracts very little attention from the media, when they publish about smart fashion. Texts about the topic can be described as a multi-discursive, where the technological discourse has been explored most intensive, followed by the fashion discourse. Against our expectations, the economical context has been also rich presented in the items about e-mode. The medical & healthcare and sport & fitness have been illuminated as the most common fields of use of the innovative clothing and gadgets. In the articles we can hear the voices of designers, experts, scientists and industrials; only consumer has been hardly presented in the texts. Remarkable, when consumers speak, they find wearables “too invasive”, “mind blowing”, “a media-hype”; the public wants to know “how technology will change our life” and is worrying about privacy and safety of personal data. Right now the mass media frames smart fashion as a niche market for minorities. The conclusion is, without a systematic and properly framed coverage of the subject in the mass media; it will be very difficult for the hi-tech fashion to find its way to the mass consumer.

Introduction

“Smart fashion” sounds fashionable! But are you ready to buy it? To begin with, the term itself has a very broad range of interpretations (from the umbrella expression for all kind of technological wearables to the exclusive fashion collections for *smart women*). There are two major usages of the concept *smart* when it

comes to clothes and fashion. First, there is a traditional interpretation of the *smart clothes* – “neat, conventional, yet relatively informal in style, especially as worn to conform to a particular dress code” (Oxford Dictionary). In this sense the term has often been used in the “style solutions” articles in mass media (see, for example, the publication “8 Workwear Brands to Have on Your Radar” by Olivia Lindbury in the Telegraph (Lindbury, 2015)). The second, relatively new, meaning of the term emphasises the technological and user beneficial characteristics of the wearable item. This is how, for instance, the AiQ Smart Clothing Inc. put it: “Electronics merge with textiles to create fashionable, comfortable, functional solutions to meet your everyday needs; whether it's in sports & fitness, outdoor & leisure, home & leisure, home care & health care” (<http://www.aiqsmartclothing.com/>).

Within this modern concept of smart fashion a lot of different types of wearables can be named. There are accessories, e-textile & garments, clothes & shoes, etc. For the experts in smart textile the concept of smart clothing “consists of a textile structure that senses and reacts to different stimuli from its environment” (Berglin, 2013: 3). For the researchers of the semantics of smart clothes this term “describes garments that future a function (in- and output) in combination with an intelligent material” (Steffen, Adler and Weber Martin, 2009; 80). Based on the analysis of ca. 40 products (items already established on the market or market-ready and also experimental pieces), Steffen, Adler and Weber Martin (81—82) presented quadrant-model of smart clothes; this classification consists of four types of garments, which –

- “Characterize neither an appealing design nor additional benefit”;
- “Exhibit a verifiable surplus but are in terms of design likewise average”;
- “Are explicitly designed with focus on expression and special effects”;
- “Offer simultaneously a challenging design and utility value”.

However, due to the different grounds and perspectives of research there is no universal classification in the field of wearables yet; we assume that such a task by itself will be rather challenging for the researcher as long as it will be just a description of the rapidly changing and growing phenomenon.

In our paper we will use the term *smart fashion* in the most common way as a *collective name of any apparel, which has any additional function, created by innovative technology*. We will leave aside the discussion of whether it is fair to attribute these smart items as fashion at all.

“Big expectations”

Numerous market studies predict each year significant growth of wearable technology market and massive increase of global spending on wearable devices (up to \$218 billion in 2019). According to the overview report about smart textiles in fashion, around 70 million euros were spent by 2013 to finance EU-projects in this area (Berglin, 2013: 24). Scholars call fellows to combine efforts in “innovative interdisciplinary research in fashion by moving beyond traditional boundaries” and “to apply all the research in the multidisciplinary sector into fashion needs a transforming methodology to make the innovation socially significant and meaningful” (Hegde, 2015: 1).

“We're seeing sensors become commonplace,” DuBravac, chief economist of the Consumer Technology Assn, said. “The cost structure of sensors is going down ... so it's cheaper to build it into a wide number of things” (Chang, 2016: 3). There are also big expectations from nanotechnology, which is going to be applied in textiles. The spectrum of possible implementations is very broad (Hegde, 2015: 3): colour changing fabrics, shape memory textiles, sweat-free garments, life-signs monitoring, power generation and storage to enable communication with the outside world, strength and shock absorbent fabrics, deodorizing fab-

rics, breathable fabrics, insect killer clothing, hazard warning clothing, functional sportswear, etc. According to Hedge, “innovations in these sectors create significant demand for functional clothing which has a massive impact on today’s fashion trends” (Hegde, 2015: 3).

Simultaneously, market analytics are talking about “the uncertainty of consumer receptivity” (Wearable technology in Industry verticals 2014-2019, 2015). In 2006 researchers describe the field of smart clothes as “twofold”: driven by technology, and by art and Haute Couture. “In both cases clothing neglects the needs and wants of customers and the requirements of daily use” (Steffen, Adler and Weber Martin, 2006: 79). Despite the fact that this statement has been made a decade ago, it is still valid for the modern situation on the field. The more recent report about the EU-projects within smart textiles and clothing shows “the faith in technology as a solution on a number of problems, which all of them are based on speculations rather than thoroughly investigations about the real need for technology”. The author of the study, L. Berglin from the Swedish School of Textile, tells that “expectancy that smart textiles concern mass consumption and mass production” is “not necessarily the case” (2013: 4). “Despite a rather extensive research effort the industrial and commercial activities are still in its infancy”, Berglin has concluded (24).

Till now the popularity of wearables is limited to a number of gadgets as smart watches and fitness bands, health and self-care wearable devices. Substantially, all these “smart attires” are in use of early adopters; “a lot of wearables at the moment are selling gimmick”, says co-founder of Intelligent Textiles A. Thompson (In Bearne, 2015). Mass production of smart fashion items is still out of question.

Discourse and framing studies

“In order to successfully introduce smart textiles in fashion there is a need for a multitude of methodologies. Areas like art, technologies, social science, for example, need to be combined in order to transform technology into meaningful form of use”, Berglin pointed out (2013: 4). We will take liberty to add that without a systematic and properly framed coverage of the subject in the mass media, it will be very difficult for the hi-tech fashion to find its way to the mass consumer.

Researchers emphasize the crucial role of the mass media in the fashion discourse, where the media has been seen as “an important basis of the ideology of consumption”. “Fashion discourses indoctrinate consumers in this ideology of consumption” (Thompson and Haytko, 1997: 16). From this perspective, we hypothesize that the existing way of smart fashion framing is still too lopsided and does not provide the adoptable image of smart wearables for the average consumer. We use the term “average consumer” in the same way as “later adopters” and as an opposite to “innovators” and “early adopters” (Martinez and Polo, 1996).

The contemporary understanding of framing effects is bound to behavioural or attitudinal outcomes of mass-media communication. These effects are “not due to differences in what is being communicated, but rather to variations in how a given piece of information is being presented (or framed) in public discourse” (Scheufele and Lyengar, 2014).

“A frame is an attribute of the object under consideration because it describes the object” (McCombs, 2005: 546). McCombs points out two distinct types of attributes – aspects and central themes. The latter, “frames”, define a dominant perspective on an object.

According to M. Entman, “Framing essentially involves selection and salience. To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for item described” (Entman, 1993: 52).

Entman gave a definition, which has an important methodological and “instrumental” meaning for the construction of our measurement instruments – content analysis and the coding system. The scholar said, “Frames, then, *define problems* – determine what causal agent is doing with what costs and benefits,

usually measured in terms of common cultural values; *diagnose causes* identify the forces creating the problem; *make moral judgements* – evaluate causal agents and their effects; and *suggest remedies* – offer and justify treatments for the problems and predict their likely effects. A single sentence may perform more than one of these four framing functions, although many sentences in a text may perform none of them. And a frame in any particular text may not necessarily include all four functions" (1993: 52).

Discourse as a concept is central to the methodology of our content analysis. According to Fairclough, "Different discourses are different perspectives on the world, and they are associated with the different relations people have to the world" (2003: 124). Discourse analysis helps to understand how the mass media texts represent aspects of the world and how they are linked to power relations in the society. In our research, we have had to deal with at least two main discourses in the texts: fashion and technological.

In order to develop the coding system for our research the three-dimensional model of critical discourse analysis (CDA) has been applied. After Fairclough, Jorgensen and Phillips explained that "...every instance of language use is a communicative event consisting of three dimensions:

- it is a *text* (speech, writing, visual image or a combination of these);
- it is a *discursive practice* which involves the production and consumption of texts; and
- it is a *social practice*" (2002: 68).

All these dimensions have been converted in to our codebook as far as it was possible. Not all elements of discursive and social practices manifest itself in the text; analysis of these extra-textual elements has been not included in the present paper¹

The project "Smart fashion"

How has smart fashion been presented in the modern mass media? What do consumers think about the integration of vogue and technology? These research questions have been formulated as a part of the bigger project – Smart Fashion – where students and researchers of the Fashion Technology Lab (Amsterdam Creative Industries Network) have tried to find out whether it is possible to combine fashion and hi-tech, aesthetics and functionality. While the team of the Amsterdam University of Applied Science was busy with prototypes, the students of the Inholland University of Applied Science were conducting a series of interviews with consumers. The study of the way of media-presentation was organised in the traditional academic manner and was done by the researcher of Inholland. In this paper we are going to present the results of the content analysis of the media publications about the subject of interest.

Methodology

To understand how the smart fashion topic has been translated to the public, we have conducted content analysis. The articles with queries as *intelligent clothing, smart fabrics, futuristic clothing, e-textile, high-tech shoes*, etc. have been collected from LexisNexis database. Initially, no time limitations were chosen, the first sample included 448 relevant publications in English with the following distribution by search terms (Fig. 1). From 448 relevant publications, 100 most recent (2015—2016) texts with the same distributive correlation between the topics (search terms) were selected for the further coding. All texts have been processed manually through the MaxQDA software.

¹ For instance, analysis of the interviews with consumers could make the description of the relevant discursive and social practices more meaningful. Still, the quality of the interviews

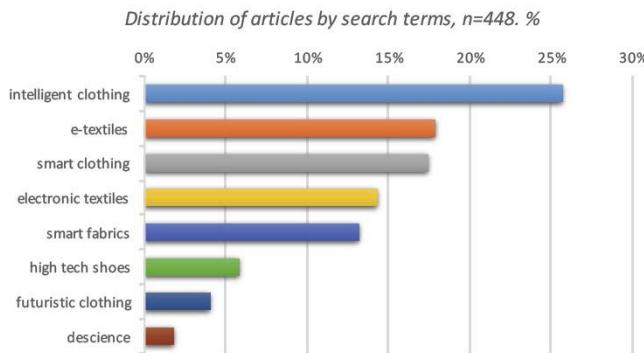


Figure 1. Distribution of articles from Lexis Nexis by search terms conducted by students during our project is good for the learning goals and not high enough for the conditions of reliability of our research.

For the coding different methods have been used: In Vivo, Initial, Provisional codes for the first cycle coding and Pattern and Theoretical coding for the second cycle (Saldaña, 2013).

Results

The code system for the content analysis has been resulted in the list of the following major categories: “main subject of article”; “genre of article”; “geography”; “actors of social practices”; “consumer values & experience”; “discourses”. The last category includes “fashion discourse”, “technological discourse” and “another discourse by market sector”.

Main subject of article (Figure 2). The latest innovations in smart textile have been most common subject of the journalist's messages when they reported about wearables. Herewith, the news about a scientifical and technological invention, or about a new product relies accounted for nearly a third of the posts in this category (all four types of garments from the classification of Steffen, Adler and Weber Martin (2013) have been presented in the corpus). The review of the marketing research together with the reports from all kind textile shows & exhibitions formed another third of the corpus. The rest consists of the publications about collaboration between designers and scientists, about educational programs for students and children, about research programs of the EU etc.

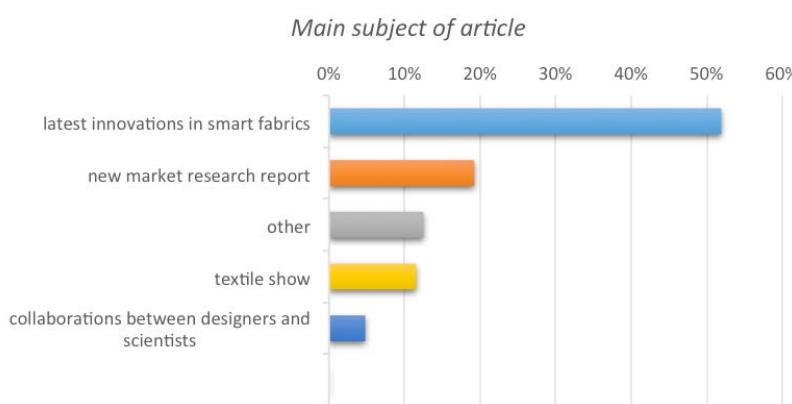


Figure 2. Main subject of articles

Genre of article. The first place belongs to feature article – commonly between 400 and 600 words, description of a new product or a number of products, discovery or research program. These texts give more space for explanations, pieces of interviews, historical references and other genre elements, what makes texts more information-rich. On the second place is a review of a new market research report; most of these texts

have a pure informative character and address the audience to the further reading via a hyperlink to the primary source. Genres of the announcement, news article and trends overview, shared the third place of popularity among the texts about the smart clothing.

Geography. Under this category we have coded the country and the production company(s) mentioned in texts. US is the absolute leader when it goes about the development in the wearables field; Europe, with UK as its pacesetter, stands a little behind; Asia-Pacific region has been also named regularly in the coded texts (it is hard to say which country in Asia is a leader, all mentioned countries – China, India, Japan, Pakistan and Shi-Lanka – got more or less the same amount of attention in the world press).

All companies mentioned in coded texts have been divided in 3 sub categories (in descending order of the number of coded elements): small and medium-sized start-up companies (with Sensoria Inc. as a leader); big clothing retailers, production companies, fashion- and ware- houses (with Adidas, Ralph Lauren and Nike at the head) and hi-tech multinationals (with Google, Samsung, Intel and Du Pont as most popular members of the article discourse).

Actors of social practices. Under “actors” we understand people and organisations, which are involved in the discursive practices under the study. In our case this coding category has been resulted in the following number of sub nominations: “professionals”, “NGO’s and research centres”, “representatives of business field”, “experts”, “government” and “consumers”. The distribution of these sub codes has been shown in the Figure 3.

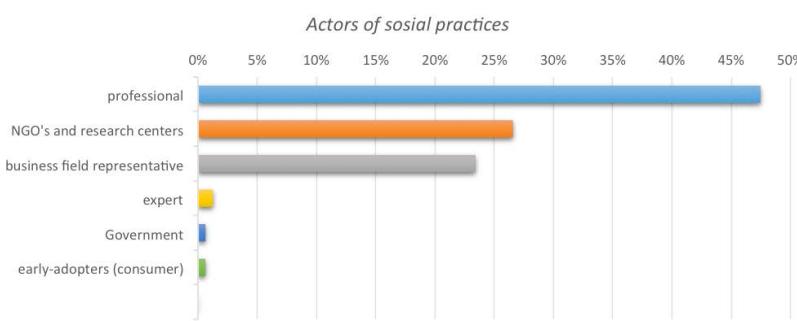


Figure 3. *Actors of social practices*

To give more detailed idea of what kind of “players” one can see on the field of smart fashion, there are some examples: first of all, professionals as university researchers, engineers, and designers take a word; they are followed by educators and design students. Sometimes market researchers give a comment or a prediction. Experts in market of wearables and/or fashion gave their estimates on the future development of the field. Representatives of production companies, inventors of innovation technology and organizers of smart textile shows, are telling the readers about their creations etc. All these players present the inside view of the field of the smart products. Other types of professionals, such as artists or bloggers, perform the function of a public opinion. Nevertheless, the very essential player of the field has been forgotten – the end- user of a product, consumer, has been hardly mentioned in the coded corpus. Government organisations have been also very purely represented.

Discourses. Texts about the topic can be described as a *multi-discursive*, where the technological discourse has been explored most intensive, followed by the fashion discourse.

Against our expectations, the economical context has been also rich presented in the items about e-mode. Most popular topic in this category is “investments”. The “medical & healthcare” and “sport & fitness” have been illuminated as the most common fields of use of the innovative clothing and gadgets. Usage in worker, military wear, as well as maintenance of mobile apps, has been also often described. The narrative about the future is a common place in the coded texts.

The lion share of the *technological discourse* in the studied corpus is devoted to the new technologies – what is this? How does it work? How it can be implemented? What can it do? Etc. Main qualities (breathability, washability, self-cleaning ability, and so on) and options (motion, touch, pressure, lighting, etc.) have been usually mentioned and described with different grade of particularity.

The *discourse of fashion* has been presented, but not in the way what we used to see in the conventional fashion magazines (Moeran, 2013). The difference can be seen not so much in the elements of the fashion discourse (they are all presented in the corpus – “item”, “catwalk”, “designer’s story”, “brand”, “price” etc.), as in an emphasis in the narrative. Remarkably, from 315 units coded as fashion discourse, not more than 25 text fragments have something to do with aesthetic sense of the described smart apparel. When it is the case, we see the text about the designer’s models made for the “red carpet” or for the fashion show. “One of a kind” items, showpieces for a museum, and experimental prototypes have been described in the terms of “look”, “silhouette”, “patrons” and “style”. All these elements are missing in the stories about workout wear, smart lifestyle and medical attachments. Aesthetical description of “detail” gives its way to technical specification of the item; the talk about functionality became most important in the text. This last observation is still consistent with one of the conclusions made by Berglin in 2013 about the focus of EU-projects on “technical aspects of clothing rather than fashion” (26).

Anyhow, journalists have reported the signs of convergence between technology and fashion. The best example of such cooperation is the project Descience. “[Scientists and designers] think, develop, and create in very similar ways, but it has never been put together,” said the project representative. “Fashion is an amazing visual language, and fashion designers are amazing translators for scientists to communicate their work in a completely different way” (Li, 2015).

Consumer values & experience. From 1636 coded units, only 40 fall under this category. The consumer’s concern has been mentioned in positive (16) and in the negative (20) manner. Different types of doubts and distrust expressed in the posts, together with descriptions of unpleasant user experience, have been qualified as “negative”. Under the code “positive” we have placed the demonstration of good expectations (for example, “reduce of health costs”), affordability, and other positive qualities of smart item.

Remarkably, when consumers speak, they find wearables “too invasive”, “mind blowing”, and “a media-hype”; the public wants to know “how technology will change our life” and is worrying about privacy and safety of personal data. All these fears and uncertainty are growing in the context of the public discourse. The way in which the innovations described in the media has an impact on the public attitude.

When you read about smart fashion in the specialised media, as “Wearable Style News” or hi- tech blogs, you got an impression that everybody are already busy with wearables and that smart clothes have reach mass consumer already. This is forgivable for the specialised media as long they are oriented to the special reader (early adopter). But the same optimistic tone we see very often in the media oriented to mass audience, in other words, to the average, mass consumer.

SNN Wire spread out: “Tech companies are unveiling smart watches and bracelets at a rapid-fire pace, but for many designers, that’s already last season. Get ready for solar dresses, 3D-printed bras and GPS-enabled blazers” (O’Brien, 2014). “This year prepare to see creativity combined with tech becoming more mainstream. Everyone will be doing it”, said Zoe Philpott, interactive storyteller and creator of *Ada.Ada.Ada* in the interview for Guardian (Bearne, 2015).

Nevertheless, with all these positive news on the background, the natural actor of the above- mentioned social practice – average consumer – remains indifferent or suspicious for all these “gimmicks”, “bonkers” and “descience” creations. No wonder, if even designers themselves cannot always explain clearly what is the benefits of their creations. So, Italian company Footmoov made shoes that contain sensors connected to a phone via We-Fi. “Why? Good question — one Footmoov themselves haven’t completely figured out just yet”, pointed the journalist out (Kinney, 2016). Sometimes the explanation of supposed practical application sounds at list odd: “the students who designed this futuristic glove believe it could transform the

lives of the deaf" (Deutsche Presse-Agentur, 2015). Or: "There is also a 'Running Pack' that changes colors based on your performance, and a 'Connection Pack' so that you can copy friends or celebrities. (Zolfaghariefard, 2015). After description of a number intelligent items, Canadian reporter have concluded, "Whether this much intel will become fashion's next big thing is hard to imagine, even in this Information Age" (Von Hahn, 2015).

Expectations of a certain kind have been provoked in symptomatic headlines such as "Rise of the machines" (Kanjilal, 2015), "Back to the Future" the predictions that came true (Midgley, 2015), "The Devil Wears Pulsars" (Li, 2015). Non-realistic and fiction tone became even more strong when narrator begins the text from the constructions such as "imagine..." ("Imagine your clothes rigged with self airconditioning!" (Apparel Online, 2015)), which is regularly in use by authors writing about hi-tech fashion.

There is one more aspect that we need to take in consideration – clothing and self-image. "Apparel marketers ... try to reach the fashion innovators through the mass media and depend on them to legitimize fashion for later adopters", says Goldsmith and Moore (1999; 12). And the same time, "new styles that are congruent with fashion innovator self-image should form longer-lasting trends than these appealing simply to the desire for novelty". Our content analysis demonstrates that the most media publications go not further than this simple desire.

Conclusion

Right now, the mass media frames smart fashion as a niche market for minorities. In the same time this picture is a part of fashion discourse, which consumers adapt to their individual vision of fashion and its consumption (Thompson and Haytko, 1997). According to recent survey by The NPD Group, there is a growing interest among the consumers in "more established fabric technologies in activewear" and "a growing desire for newer advancements in smart fabrics" (Feitelberg, 2015). To "translate" this "growing interest" in to profitable production for mass consumption the players of the smart fashion field need to involve the public in the play. Till now an average consumer remains a passive observer of futuristic experiments. The niche market is almost limited to a number of gadgets, fancy adds to sportswear, and medical equipment's.

References

Apparel Online. (2015, December 16) 'Air-Conditioning' to the Wearer Through A New Smart Fabric. Apparel Online.

Bearne, S. (2015, August 03). Is wearable technology set to take over our wardrobes? The Guardian. Retrieved from <https://www.theguardian.com/small-business-network/2015/aug/03/wearable-technology-wardrobes-smart-fashion>

Berglin, L. (2013). Smart textiles and wearable technology - A study of smart textiles in fashion and clothing (A report within the Baltic Fashion Project, published by the Swedish School of Textiles, University of Borås). Retrieved from https://www.hb.se/Global/HB%20-%20student/utbildningsomr%C3%A5den/THS/BalticFashion_report_Smarttextiles.pdf

Business Wire. (2015, October 6). Research and Markets: The Future Market Potential for Smart Garments and E-textiles 2015-2016. Business Wire. Retrieved from <http://www.businesswire.com/news/home/20151006006566/en/>

Chang, A. (2016, January 5). CES focus is on trends; But global technology sales are predicted to drop 2% this year.. Los Angeles Times, p. 3.

Deutsche Presse-Agentur. (2015, August 15). Deutsche Presse-Agentur. Retrieved from <http://www.brecorder.com/cotton-a-textiles/186:world/1220200:smart-textiles-boots-count-steps-gloves-talk-on-wearers-behalf/>

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of communication*, 43(4), 51-58.

Goldsmith, R. E., & Moore, M. A. (1999). Fashion innovativeness and self-concept: A replication. *Journal of Product & Brand Management*, 8(1), 7-18.

Fairclough, N. (2003). *Analysing discourse. Textual analysis for social research* (1st ed.). New York: Routledge.

Feitelberg, R. (2015, December 14). Get Moving. *Women's Wear Daily*, 23(210), 28.

Hahn, K. (2015, July 18). Behind-the-seams look at athletic clothing; Design Exchange's show examines confluence of style and performance. *The Hamilton Spectator*, p. G.6.

Hedge, M. (2015). Smart Fashion for the future through biotech and nanotechnology – An overview. *International journal of interdisciplinary research innovations*, 3(3), 1-4.

Jorgensen, M., & E Phillips, L. (2002). *Discourse Analysis as Theory and Method* (Rev. ed.). London: Sage.

Kanjilal, P. (2015, August 23). Rise of the machines. *Indian Express*. Retrieved from <http://academic.lexisnexis.eu.in-holland.idm.oclc.org/>

Kinney, C. (2016, February 01). These Stylish Italian Shoes Are Actually Connected Smart Shoes. *Chip Chick*. Retrieved from <http://www.chipchick.com/2016/02/footmoov-italy-connected-shoes.html>

Li, S. (2015, January 29). The Devil Wears Pulsars. *Atlantic Online*, 1(1). Retrieved from <http://www.theatlantic.com/technology/archive/2015/01/the-devil-wears-pulsars/384902/>

Lindbury, O. (2015, September 7). 8 Workwear Brands to Have on Your Radar.. *The Telegraph*.. Retrieved from <http://www.telegraph.co.uk/fashion/style/smart-workwear-brands-to-have-on-your-radar/>

Martinez, E., & Polo, Y. (1996). Adopter categories in the acceptance process for consumer durables.. *Journal of Product & Brand Management*, 5(3), 34-45.

McCombs, M. E. (2014). *Setting the agenda: The mass media and public opinion* (2nd ed.). Malden: Polity Press.

Midgley, D. (2015, October 21). Back to the Future the predictions that came true. *The Express*, p. 25. Moeran, B. (2013). Proposing fashion: The discourse of glossy magazines.. *Comunicação e Sociedade*, 24, 120-142.

Oxford Dictionary. (n.d.). Smart casual. Retrieved from https://en.oxforddictionaries.com/definition/smart_casual

O'Brien, S. A. (2014, 08 september). Forget smart watches. Solar dresses are the future [Persbericht]. *CNN Ware*. Retrieved from https://www-nexis-com.inholland.idm.oclc.org/results/shared/controller/enhpermalink.do?permaLinkInfoKey=0_T2 5264046343&selThresholdvalue=undefined

PR Newswire. (2015, May 25). Wearable technology in Industry verticals 2014-2019. *PR Newswire*. Retrieved from <http://www.telegraph.co.uk/fashion/style/smart-workwear-brands-to-have-on-your-radar/>

Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). London: SAGE.

Steffen, D., Adler, F., & Weber Marin, A. (2009). *Smart Semantics Product Semantics of Smart Clothes*. Paper gepresenteerd op de IASDR Conference, Seoul, South Korea. doi:https://www.academia.edu/212575/Smart_Clothes._Product_Semantics_of_Smart_Clothes?a_uto=download

Tewskbury, D., & Scheufele, D. (2009). News framing theory and research.. In J. Bryant, & M. Oliver (Eds.), *Media effects: Advances in theory and research* (3rd ed., pp. 17-33). Hillsdale, NJ: Erlbaum.

The Guardian. (2016, January 08). Arts, culture, creativity and tech: key trends for 2016. *The Guardian*, p. Culture Professionals Network.

Thompson, C. J., & Haytko, D. L. (1997). Speaking of fashion: Consumers' uses of fashion discourses and the appropriation of countervailing cultural meanings.. *Journal of Consumer research*, 24, 15-42.

Zolfagharielard, E. (2015, June 26). The only pair of trainers you'll ever need: Concept sneakers allow you to change colour and design on-demand. *MailOnline*. Retrieved from https://www-nexis-com.inholland.idm.oclc.org/results/shared/controller/enhpermalink.do?permaLinkInfoKey=0_T2 5263965338&selThresholdvalue=undefined

Colophon

PUBLICATION

UNIVERSITY OF APPLIED SCIENCES AMSTERDAM

AMFI-Amsterdam Fashion Institute

October 2017

DESIGN

STUDIO MORREAU.COM

PHOTOGRAPHY

Main Cover Photo by *Despoina Markopoulou*.

Cover Photo Fashion Activism by *Amy Kleingeld*.

Cover Photo Fashion Business Models by *Liselotte Fleur*.

Cover Photo Fashion Disruptive Technology by *Merel Korteweg*.

INFORMATION

AMFI-Amsterdam Fashion Institute

ADDRESS

UNIVERSITY OF APPLIED SCIENCES AMSTERDAM

AMFI-Amsterdam Fashion Institute

Mauritskade 11

1091 GC, Amsterdam, The Netherlands

Tel: +31(0)20-595 45 55

amfi.mail@hva.nl

www.amfi.nl